

Remarks

Claims 1-24 are pending.

Claims 1-24 were rejected by the Examiner. The drawings are accepted.

Claims 22-24 were rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. Claim 8 was rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-24 were rejected under 35 USC 103(a) as being unpatentable over Everdell (US Pub. 2002/0165961).

Claims 1, 3-4, 8, 15, 17-19, and 22 are amended. Claims 2, and 5-6 are canceled. The features recited in claims 2, 5, and 6 are incorporated in claims 1, 15, 19, and 22. No new subject matter is added. Claims 1, 3-4, and 7-24 remain in the case for consideration. Reconsideration and allowance of claims 1, 3-4, and 7-24 are requested in light of the above amendments and the following remarks.

In the Specification

The specification was not objected to by the Examiner. The specification is amended to reflect the following changes:

On page 7, line 3, replace “10/XXX,XXX” with –10/714,412–.

Claim Rejections – 35 U.S.C. § 101

Claims 22-24 were rejected for non-statutory subject matter. Claim 22 is amended to recite “An article of computer-readable media containing instructions that, when executed, cause the computer to...” Claims 22-24 thus recite statutory subject matter. Applicant respectfully requests the withdrawal of the rejection.

Claim Rejections – 35 U.S.C. § 112

Claim 8 was rejected stand rejected for being indefinite. Claim 8 is amended to delete the word “the” that precedes “Network Processing Forum”. Applicant respectfully requests the withdrawal of the rejection.

Claim Rejections – 35 U.S.C.103

Claims 1-24 were rejected as being unpatentable over Everdell. The applicant traverses the rejection for the following reasons.

Claim 1 recites “a control point, wherein the control point is one of a control plane to implement a core functionality of the control plane protocol module, or a forwarding plane to implement a portion of the control plane protocol module that is separated from the core functionality.” *See* specification, page 5, lines 12-14.

Everdell teaches a network device having a dedicated control path separated from the data path and dedicated control path resources for each distributed processor within the network device, such that each distributed processor has sufficient bandwidth on the control path to transmit control information at high frequencies. *See* Everdell, paragraph [0008], and abstract. Nowhere does Everdell teach a distributed processing architecture to offload portion of the control plane processing for a control plane protocol module from the control plane to at least one forwarding plane, such that a core functionality of the control plane protocol module is implemented at the control plane, while a portion of the control plane protocol module that is separated from the core functionality is implemented in the forwarding plane.

The Examiner alleges that Everdell teaches a controller control plane protocol module and a worker control plane protocol module, citing the elements “master SRM”, “MCD”, and “LRM” described in paragraphs [166], [577]. But these relevant paragraphs merely describe a

hierarchical relationship between the master SRM 36 and the local resilient manager LRM. Specifically with reference to FIG. 26, Everdell discloses “the master SRM 36 serves as the top hierarchical level fault/event manager, each slave SRM 37a-37n serves as the next hierarchical level fault/event manager, and software applications resident on each board, for example, ATM 110-113 and device drivers 43a-43d on line card 16a include sub-processes that serve as the lowest hierarchical level fault/event managers (i.e., local resiliency managers, LRM).” In other words, Everdell’s master SRM and local resilient manager LRM perform the same functions but with different level of abstractions, not different functions as recited in claim 1, namely “the core functionality of the control plane protocol module and the portion of the control plane protocol module that is separated from the core functionality.” With respect to Everdell’s MCD, neither the relevant paragraphs cited by the Examiner nor elsewhere does Everdell mention or imply that Everdell’s MCD implements “a core functionality of the control plane protocol module,” while offloading the portion separated from the core functionality to the slave and/or local resilient manager.

The Examiner further alleges that Everdell teaches the claimed control plane in a network device, citing paragraphs [0145] and [0010]. Everdell’s [0145] teaches one or more out-of-band management channels used to send high-priority requests and notifications between each NMS client and each NMS server to ensure fast response time. For example, Everdell’s FIG. 1 shows an Ethernet 32 that provides an out-of-band control path, meaning that control information passes over Ethernet 32 but the network data passes over a separate data path 34. *See* Everdell, paragraph [0116], and FIG. 1. Everdell’s paragraphs [0145] and [0010] at best disclose a dedicated path for sending control and/or management information between the NMS servers

and NMS clients, rather than “a control plane implementing a core functionality of a control plane protocol module” in a network device as claimed.

The Examiner alleges that Everdell teaches a forwarding plane, citing paragraph [0153]. Paragraph [0153] merely describes the periodic sending of roll call messages from the NMS clients to the NMS servers over the out-of-band management channels to determine if the connections between each client and the servers are still valid. If a server does not respond, then a client knows the connection has been lost, and the client can immediately notify the system administrator.” This paragraph fails to teach “a forwarding plane implementing a portion of the control plane protocol module that is separated from the core functionality” in a network device.

Further, Everdell does not teach an infrastructure module and a communication library resident on the control point, constructed and arranged as specifically claimed. The Examiner refers to Everdell’s paragraphs [0010] and [0145] as disclosing the infrastructure module. *See* Office Action, page 4. Paragraph [0145] of Everdell discloses an infrastructure to allow communications between the NMS servers and NMS clients, and between the NMS servers and the network devices, not “an infrastructure module resident on the control point constructed and arranged to allow the control point to connect and exchange information with other control points.” Paragraph [0010] does not cure the deficiency, since it merely discloses connection between each of the distributed processors (the Examiner identifies each of the distributed processor as disclosing the recited control point, *See* Office Action, page 4) and the control path via at least one control link, not connection between the distributed processors.


For at least the reasons discussed above, claim 1 is patentably distinguishable from Everdell, as are its dependent claims 3-4, and 7-14. Claims 15, 19, and 22 recite similar features as claim 1. Therefore, claims 15-24 are also patentably distinguishable from Everdell.

No new matter has been added by this amendment. Allowance of all claims is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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